 Form 1449 (Modified) Information Disclosure Statement By Applicant Use Several Sheets if Necessary	Atty Docket No. SRI1P031-/US-4149-5	Application No.: 10/090,231
	Applicant: Heim, et al.	Group Unknown
	Filing Date February 28, 2002	

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
[Signature]	A1	5,977,685	11/02/99	Kurita, et al.			06/03/96
	A2	6,060,811	05/09/00	Fox, et al.			07/25/97
	A3	6,084,321	07/04/00	Hunter, et al.			08/07/98
	A4	6,184,608	02/06/01	Cabuz, et al.			12/29/98
	A5	6,184,609	02/06/01	Johansson, et al.			03/26/97
	A6	6,249,076	06/19/01	Madden, et al.			04/14/99
	A7	4,236,416	12/02/80	Barcita			9/28/78
	A8	4,240,535	12/23/80	Pierce et al.			12/23/80
	A9	4,227,347	10/14/80	Tam			9/14/78
	A10	4,885,783	12/05/89	Whitehead, et al.			04/10/87

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
[Signature]	B1	Bar-Cohen, Yoseph, JPL, <i>Worldwide Electroactive Polymers, EAP (Artificial Muscles) Newsletter</i> , Vol. 3, No.1, June 2001
	B2	Baughman, R.H., L.W. Shacklette, and R.L. Elsenbaumer, E. Plichta, and C. Becht, "Micro electromechanical actuators based on conducting polymers", in <i>Molecular Electronics, Materials and Methods</i> , P.I. Lazarev (ed.), Kluwer Academic Publishers, pp. 267-289 (1991)
	B3	Brock, D. L., "Review of Artificial Muscle based on Contractile Polymers," MIT Artificial Intelligence Laboratory, A.I. Memo No. 1330, Nov. 1991.
	B4	Caldwell, D., G. Medrano-Cerda, and M. Goodwin, "Characteristics and Adaptive Control of Pneumatic Muscle Actuators for a Robotic Elbow," Proc. IEEE Int. Conference on Robotics and Automation, San Diego, California (8-13 May 1994).
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[Signature]	9/13/04	

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Other Documents




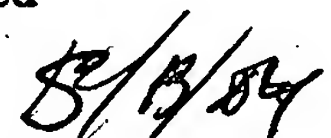
Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
<i>JA</i>	C1	De Rossi, D., and P. Chiarelli. 1994. "Biomimetic Macromolecular Actuators," <i>Macro-Ion Characterization, American Chemical Society Symposium Series</i> , Vol. 548, Ch. 40, pp. 517-530.
	C2	Dowling, K., <i>Beyond Faraday-Non Traditional Actuation</i> , available on the World Wide Web at http://www.frc.ri.cmu.edu/~nivek/OTH/beyond-faraday/beyondfaraday.html , 9 pages, 1994
	C3	Flynn, Anita M., L.S. Tavrow, S.F. Bart, R.A. Brooks, D.J. Ehrlich, K.R. Udayakumar, and L.E. Cross. 1992. "Piezoelectric Micromotors for Microrobots," <i>IEEE Journal of Microelectromechanical Systems</i> , Vol.1, No.1, pp. 44-51 (March 1992); also published as <i>MIT AI Laboratory Memo 1269</i> , Massachusetts Institute of Technology (February 1991).
	C4	Hirose, S., <i>Biologically Inspired Robots: Snake-like Locomotors and Manipulators</i> , "Development of the ACM as a Manipulator", Oxford University Press, New York, 1993, pp.170-172.
	C5	Jacobsen, S., Price, R., Wood, J, Rytting, T., and Rafaelof, M., "A Design Overview of an Eccentric-Motion Electrostatic Microactuator (the Wobble Motor)", <i>Sensors and Actuators</i> , 20 (1989) pages 1-16
	C6	Kornbluh, R., G. Andeen, and J. Eckerle, "Artificial Muscle: The Next Generation of Robotic Actuators," presented at the Fourth World Conference on Robotics Research, SME Paper M591-331, Pittsburgh, PA, September 17-19, 1991.
	C7	Kornbluh, R., Pelrine, R., Eckerle, J., Joseph, J., "Electrostrictive Polymer Artificial Muscle Actuators", IEEE International Conference on Robotics and Automation, Leuven, Belgium, 1998
<i>JA</i>	C8	Pelrine, R., R. Kornbluh, J. Eckerle "Monolithic Electroactive Polymers" U.S. Patent Application No. 09/779,203 filed February 7, 2001
Examiner <i>[Signature]</i>	Date Considered <i>5/13/02</i>	

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

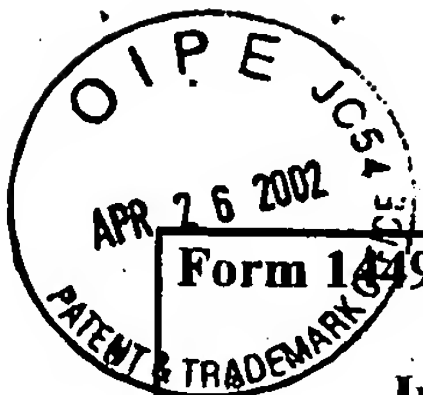


Information Disclosure Statement By Applicant	Form 1449 (Modified)	Atty Docket No. SRI1P031-/US-4149-5	Application No.:
	Applicant: Heim, et al.	Filing Date	Group

Other Documents

Other Documents		
Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	D1	Kornbluh, R., R. Pelrine, Jose Joseph, Richard Heydt, Qibing Pei, Seiki Chiba, 1999. High-Field Electrostriction of Elastomeric Polymer Dielectrics for Actuation", Proceedings of the SPIE International Symposium on Smart Structures and Materials: Electro-Active Polymer Actuators and Devices, March 1-2, 1999, Newport Beach, California, USA. Pp. 149-161
	D2	Kornbluh, R. D and R. E. Pelrine., "Dexterous Multiarticulated Manipulator with Electrostrictive Polymer Artificial Muscle," ITAD-7247-QR-96-175, SRI Project Number 7247, Prepared for: Office of Naval Research, November 1996
	D3	Lang, J, M. Schlect, and R. Howe, "Electric Micromotors: Electromechanical Characteristics," Proc. IEEE Micro Robots and Teleoperators Workshop, Hyannis, Massachusetts (November 9-11, 1987).
	D4	Lawless, W. and R. Arenz, "Miniature Solid-state Gas Compressor," <i>Rev. Sci Instrum.</i> , 58(8), pp.1487-1493, August 1987
	D5	Nguyen, T., J. A. Willett and Kornbluh, R., "Robotic systems," in ONR Ocean, Atmosphere, and Space Fiscal Year 1998 Annual Reports (Dec. 1998)
	D6	R. Pelrine and Kornbluh, R., and. 1995. " <i>Dexterous Multiarticulated Manipulator with Electrostrictive Polymer Artificial Muscle Actuator</i> ," EMU 95-023, SRI International, Menlo Park, California, April 28, 1995.
	D7	Pelrine, R. and Kornbluh, "Electroactive Polymer Devices", U.S. Patent Application No. 09/619,846, filed July 20, 2000, 67 pages
	D8	Pelrine <i>et al.</i> , "Electroactive Polymer Generators", U.S. Patent Application No. 09/619,848, filed July 20, 2000, 69 pages
	D9	Ford, V. and J. Kievet, " <i>Technical Support Package on Traveling-Wave Rotary Actuators</i> " NASA Tech Brief Vol. 21, No. 10, Item #145, from JPL New Technology Report NPO-19261, October 1997
Examiner	Date Considered	
		

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Form 1449 (Modified)

**Information Disclosure
Statement By Applicant**

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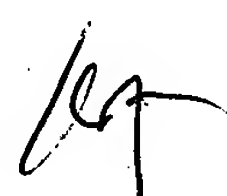
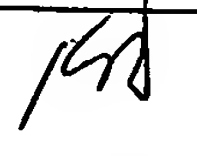
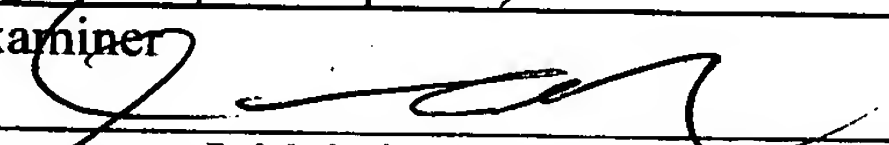
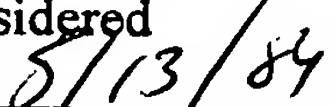
Applicant:
Heim, et al.

Filing Date
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Application No.:
10/090,231

Group
Unknown

Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	E1	Pelrine, R., R. Kornbluh, J. Joseph, and S. Chiba, "Electrostriction of Polymer Films for Microactuators," <i>Proc. IEEE Tenth Annual International Workshop on Micro Electro Mechanical Systems</i> , Nagoya, Japan, January 26-30, 1997, pp. 238-243.
	E2	Pelrine, R., R. Kornbluh, and J. Eckerle. "Energy Efficient Electroactive Polymers and Electroactive Polymer Devices", U.S. Patent Application No. 09/779,373, filed February 7, 2001.
	E3	Pelrine, R., and J. Joseph, <i>FY 1992 Final Report on Artificial Muscle for Small Robots</i> , ITAD-3393-FR-93-063, SRI International, Menlo Park, California, March 1993
	E4	Pelrine, R., R. Kornbluh, and J. Joseph, <i>FY 1999 Final Report on Artificial Muscle for Small Robots</i> , ITAD-10162-FR-00-27, SRI International, Menlo Park, California, 2000
	E5	Pelrine, R., R. Kornbluh, Q. Pei, and J. Joseph, "High Speed Electrically Actuated Elastomers with Over 100% Strain," <i>Science</i> , Vol. 287, No. 5454, pages 1-21, 2000
	E6	Pelrine, R., Roy Kornbluh, Jose Joseph, Qibing Pei, Seiki Chiba "Recent Progress in Artificial Muscle Micro Actuators," , SRI International, Tokyo, 1999 MITI/NEEDOIMNIC, 1999
	E7	Smela, E., O. Inganäs, Q. Pei, and I. Lundström, "Electrochemical Muscles: Micromachining Fingers and Corkscrews," <i>Advanced Materials</i> , Vol.5, No. 9, pp.630-632, September 1993
	E8	Wax, S. G. and R. R. Sands, "Electroactive Polymer Actuators and Devices," <i>Proceedings of the SPIE International Symposium on Smart Structures and Materials: Electro-Active Polymer Actuators and Devices</i> , March 1-2, 1999, Newport Beach, California, USA., pp. 2-10.
	E9	Winters, J., "Muscle as an Actuator for Intelligent Robots", <i>Robotics Research:Trans. Robotics International of SME</i> , Scottsdale, AZ (August 21, 1986)
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